

FIGURE 1

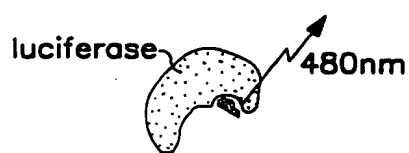


FIGURE 2A

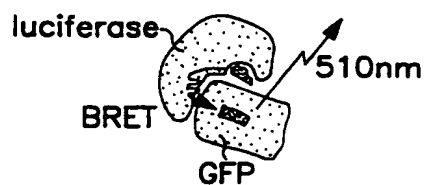


FIGURE 2C

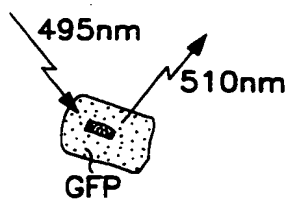


FIGURE 2B

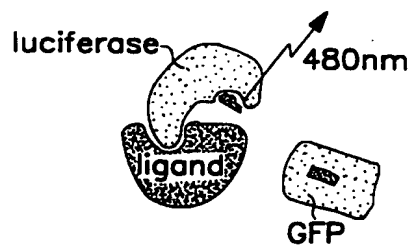


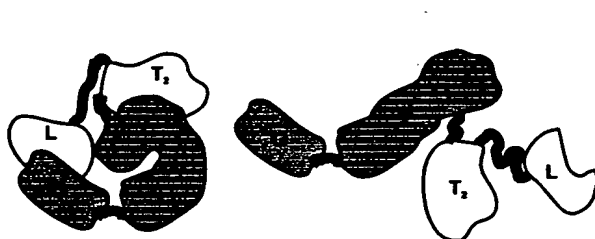
FIGURE 2D

FIGURE 2



optimized energy transfer module

simple conformational change



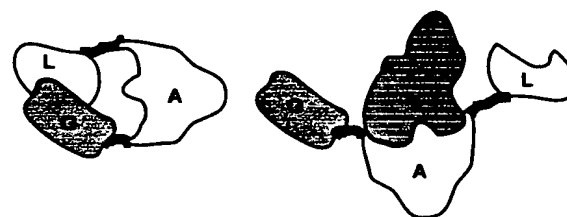
complex conformational change



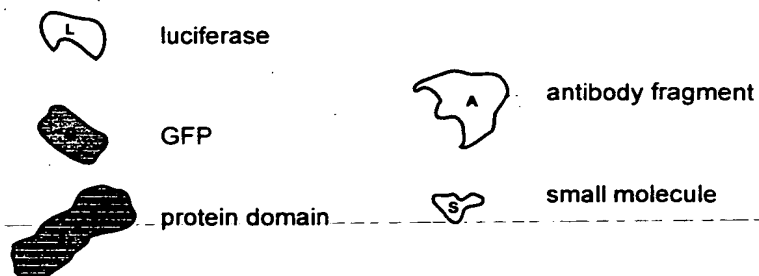
association/dissociation



small molecule interference



large molecule interference



BRET sensors are depicted for permissive and non-permissive binding states of the target molecules. Binding may be modulated by varying temperature or ionic strength.

FIGURE 3

Utilization of advantageous GFP surfaces with substituted fluorophores

	60	*	80	
RM-GFP :	GAPLPFAFDIVSPA	FQYGNRTFTKYPNDIS--	:	83
Pt-GFP :	GGPLPFAFDIVSIA	FQYGNRTFTKYPDDIA--	:	83
RR-GFP :	GAPLPFAFDIVSVA	FQYGNRAYTGYPPEEIS--	:	80
cFP484 :	GAPLPFSYDILSNA	FQYGNRALTKYPDDIA--	:	83
drFP583 :	GGPLPFAWDILSPQ	FQYGSKVYVKHPADIP--	:	80
asFP595 :	GGPLPFAFHILST	SCMYGSKTFIKYVSGIP--	:	77
dsFP483 :	GGPLPFGWHILCP	QFQYGNKAFVHHPDNIH--	:	80
amFP486 :	GGPLAFSFDILST	VFKEYGNRCFTAYPTSMP--	:	82
zFP506 :	GGPLPFAEDILSAA	FNYGNRVFTEYPQDIV--	:	80
zFP538 :	GGPLPFESEDILS	AGFKYGDRIFTEYPQDIV--	:	80

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FIGURE 4

R reniform : ---MDLAKLGLKEVMPPTKINLEGLVGDHAFSMEGVCEGNIILEGTQEVKISVTKGAPLPFAFDIVSV : 63
R_mullerei : MSKQI.KNTC.Q...SYV...I.NN.V.T...C.K...F.N.L.Q.R...P : 66
Ptilosarcu : MNRNV.KNT...I.SA.ASV...I.NN.V...F.K...V.F.N.LMQ.R...G...I : 66
drFP583 : ---RSS.NVI..F.RF.VRM..T.NG.E.FI..E...RPY..HNT..LK...G...W..L.P : 63

R reniform : AFSYGNRAYTGYPEEISDYFLQSEPECFYERNIRYQDGGTAIVKSDISLEDGKFIVNDFKAKDL : 129
R_mullerei : .Q...TF.K.ND...I...A...M...TL..E...LVEIR...N.IED...VYR.EY.GSNF : 132
Ptilosarcu : .Q...TF.K.ND...A...V...A...F...L.FE..AIVDIR...D...HYK.EYRNGE : 132
drFP583 : Q.Q...SKV.VKH..AD.P...KKL...K...VMNFE...VVT.TQ..S..Q..C..YK.K.IGVNF : 129

R reniform : RRMGPVMOQDIVGMQPSYFESMTNVTSVIGECIIAFKIQTKHFHYHMRVTVYKSKKPVEITMPLIYHF : 195
R_mullerei : PDD...KT.L.IE..F.A..M.NGVLV...V.LVY..NS..YYSC..K.LM...GV.KEF.S... : 198
Ptilosarcu : PSN...KA.L..E..F.VV..M.SGVLV...VDLVY..ES..NYSC..K.F.R..GG.KEF.E... : 198
drFP583 : PSD...KKTM..WEA..T..RL..PRDGVLK...IHK.L..KD..G.YLVEFKSI.MA..APVQL.G.YY : 195

R reniform : IQHRLVKTNNVDTASGYVVOHETAFIAHSTIKKIEGSLP--- : 233
R_mullerei : ...E.Y.EDGGF-E...QMTS.G.PL...HEWV : 238
Ptilosarcu : .H...E.Y.EEG.F-E...QLT..G.PL...HEWV : 238
drFP583 : VDSK..DI..SHNEDYTI..E.Y..RTEGR.HLFL----- : 226

FIGURE 5

Aequorea	D, E, H, K, R	N, Q, S, T	L, I, V, M, F, Y, W	A, G	C, P
R_mullerei	polar charged	polar uncharged	non-polar	hydrophobic	small not grouped
Ptilosarcu					
R_reniform					
drFP583					
drFP593					
dsFP483					
cFP484					
asFP595					
amFP486					
zFP538					
zFP506					
Aequorea					
R_mullerei					
Ptilosarcu					
R_reniform					
drFP583					
drFP593					
dsFP483					
cFP484					
asFP595					
amFP486					
zFP538					
zFP506					

<input type="checkbox"/>	dimerization	<input type="checkbox"/>	hydrophilic
<input type="checkbox"/>	surfaces	<input type="checkbox"/>	hydrophobic

FIGURE 6